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10/608,252	06/27/2003	Anthony L. Priborsky	STL11196	8554

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EXAMINER

FLOURNOY, HORACE L

ART UNIT	PAPER NUMBER
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2189

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/608,252

Applicant(s)

PRIBORSKY ET AL.

Examiner

Horace L. Flournoy

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on appeal brief received on 7/5/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-15, 18-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

In view of the Appeal Brief filed on 07/05/2007, PROSECUTION IS HEREBY REOPENED. *A new ground of rejection is set forth below.*

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution at the end of the office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Longo et al. (U.S. PG Patent No. 7,159,073 hereafter referred to as Longo).

Independent Claims

With respect to **independent claim 1**,

"A method comprising steps of: (a) assigning a unique tag for each of several disc access commands [Longo discloses in column 8, line 56 – column 9, line 14, "...The two types of data transfer commands that the disk receives, are read and write commands. These two types of commands can be reorganized into two different disk command types..."]; and (b) designating which of a plurality of queue execution modes to use for a selected one of the disc access commands based on the selected command's tag." [Longo teaches the usage of differing queue execution modes as shown in column 8, line 56 – column 9, line 14, "If an error occurs, sectors beyond the error do not have to be transferred. This type of command is also referred to as "disk non-queued" command...The disk attempts to transfer the sectors regardless of errors contained within the command limits. This type of command is referred to as a "disk queued" command."]

With respect to **independent claim 18**,

"An electromechanical device comprising: one or more data storage disc(s) a memory configured to hold several pending commands for accessing the disc(s), each of the commands having a unique tag [Longo discloses in column 8, line 56 – column 9, line 14, "...The two types of data transfer commands that the disk receives, are read and write commands. These two types of commands can be reorganized into two different disk command types..."]; and a controller configured to determine which of a plurality of queue execution modes to use for a selected one of the pending disc access commands based on the selected command's tag" [Longo teaches the usage of differing queue execution modes as shown in column 8, line 56 – column 9, line 14, "If an error occurs, sectors beyond the error do not have to be transferred. This type of command is also referred to as "disk non-queued" command...The disk attempts to transfer the sectors regardless of errors contained within the command limits. This type of command is referred to as a "disk queued" command."]

Dependent Claims

With respect to **claim 2**,

"The method of claim 1, further comprising steps of: (c) associating at least two of the disc access commands with only one of the queue

execution modes [Longo discloses in column 8, line 56 – column 9, line 14]; and (d) executing the two commands in an order that is partially based on an estimated seek length for each of the two commands.”
[Longo discloses in column 8, lines 12-18, “Since the seek time is often the largest portion of the time taken to execute a given command, it is advantageous to be able to queue up track operations and execute them in the order that minimizes their seek time. In other words, the next track is chosen to be the track that has the smallest seek time from the current track.”]

With respect to **claim 3**,

“The method of claim 1, further comprising a step of establishing a contiguous range of tags that includes the selected command’s tag, the contiguous range corresponding to the mode to be designated in the designating step (b)” [See column 14, lines 48-56]

With respect to **claim 4**,

“The method of claim 1, further comprising steps of: (c) holding a sector identifier of the disc access command in a task file register; and (d) transferring a data block corresponding to the sector identifier through a transducer adjacent to a data storage disc.” [See column 18, line 50 – column 19, line 20.]

With respect to **claim 5**,

“The method of claim 1, further comprising steps of: (c) associating one of the queue execution modes with a first queue; (d) associating another of the queue execution modes with a second queue [See FIG. 4, element 402, Disk Read Queue/Write Command Queue]; and (e) performing an operation that affects at least one command in the first queue without affecting a command that is in the second queue.” [See column 8, line 56 – column 9, line 14]

With respect to **claim 6**,

“The method of claim 1, further comprising a step (c) of determining whether to abort any of the pending disc access commands based on a newly-received command.” [See column 16, lines 1-6]

With respect to **claim 8**,

“The method of claim 1 in which the designating step (b) includes a step (b1) of determining which of a plurality of error correction modes to use for the selected disc access command.” [Longo teaches in column 10, lines 20-25, “The header for the Command Progress Queue keeps track of the error codes for a command”]

With respect to **claim 7**,

"The method of claim 1, further comprising a step (c) of redefining a queue execution mode that is associated with at least one tag while the at least one tag is not assigned to any disc access command" [Longo discloses in column 9, lines 15 -17, **"Queued commands can be processed into tracks and track sections and then ordered in a fashion that meets the performance goals discussed above."**]

With respect to **claim 9**,

"The method of claim 1, further comprising a step (c) of using at least one of the queue execution modes to transfer video data through a transducer adjacent to a data storage disc" [Longo teaches in column 10, line 20 – 25. **a queue execution mode that keeps track of errors.]**

With respect to **claims 10, 11 and 25, 26**,

"The method of claim 1(claim 9), in which the designating step (b) includes a step (b1) of determining whether to use a sequential delivery mode for the selected disc access command" [Longo teaches in column 61-63, **"The first command type includes commands in which the whole command must be completed from start to finish before starting other commands"**]

With respect to **claim 12**,

"The method of claim 1 in which a triggered operation is performed on an in-store one of the commands if an in-progress one of the commands is associated with a predetermined trigger tag, and otherwise the triggered operation is generally not performed on the in-store command." [Longo teaches the usage of differing queue execution modes as shown in column 8, line 56 – column 9, line 14, "When an error is encountered, the status is given for the command (e.g., type of error, number of blocks done). If an error occurs, sectors beyond the error do not have to be transferred..."]

With respect to **claim 13**,

"The method of claim 1 in which the designating step (b) includes a step (b1) of establishing the designated queue execution mode so that an error is reported if the selected command is not completed within a predetermined interval, and otherwise the error is generally not reported." [Longo discloses in column 10, lines 20-25, "...The header for the Command Progress Queue keep track of the error codes for a command as well as the number of blocks completed...."]

With respect to **claims 14 and 15**,

"The method of claim 1 in which the assigning step (a) comprises steps of: (a1) assigning a first one of the tags to a first-received one of the commands; (a2) while the received command is still pending, assigning a second one of the tags to a second-received one of the commands; (a3) while the received commands are both still pending, assigning a third one of the tags to a third-received one of the commands; and (a4) after the assigning steps (a1)-(a3) are completed, completing the first-, second- and third-received commands." [**"The second command type includes commands in which the command can be processed and merged in with other existing commands and it can be processed in any order (e.g., write commands with write caching on). This type of command may have the disk keep track of blocks that are in error, but not which commands they came from. When an error is encountered, status is given for the block in error (e.g., type of error, block number of error). The disk attempts to transfer the sectors regardless of errors contained within the command limits. This type of command is referred to as a "disk queued" command. Queued commands can be processed into tracks and track sections and then ordered in a fashion that meets the performance goals discussed above."** Longo discloses a method that processes commands, with any tags, (ie

read, write, error) in any order (ie sequential or first, then second, then third, then fourth as per claim 15).]

With respect to claims 19 - 24,

[Disclosed in column 17, lines 45-50, Tables 1- 5 in the spec, as well as FIGs. 4-5]

Response to Arguments from the Appeal Brief

The examiner substantially agrees with the arguments made by the applicant with regard to the previous Larson reference. Applicant's arguments with respect to claims 1-15 and 18-26 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 16 and 17 are allowable. The primary reasons for allowance of claim 16 in the instant application is the combination with the inclusion in these claims the limitation of assigning a second standard queue tag to a third-received one of the commands while the first-and second-received commands are both still pending, the third-received command being a standard write command; assigning another

tag to a fourth received one of the commands while the third received command is still pending.

Claim 17 depends upon the instant claim, and is allowable for at least the reasons set forth supra with respect to same.

The prior art of record neither anticipates nor renders obvious the above-recited combination.

CONCLUSION

Direction of Future Correspondences

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Horace L. Flournoy whose telephone number is (571) 272-2705. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:30 PM (ET).

Important Note

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald G. Bragdon can be reached on (571) 272-4204. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 746-7239.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status

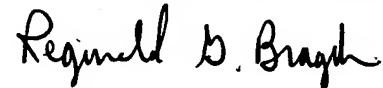
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information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Reginald G. Bragdon

A handwritten signature in black ink that reads "Reginald G. Bragdon". The signature is written in a cursive, flowing style.

Supervisory Patent Examiner
Technology Center 2100

HLF
January 15th, 2008